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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,705	05/18/2006	Joseph Kennedy	089498.0482.US	2929
39905	7590	02/18/2010		
Joseph J. Crimaldi Roetzel & Andress 222 S. Main St. Akron, OH 44308				
EXAMINER				
ZEMEL, IRINA SOPHIA				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
02/18/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,705

Applicant(s)

KENNEDY ET AL.

Examiner

Irina S. Zemel

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6 and 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. "PEB", which recitation is not supported by the originally filed application either literally or by any general concept that provides meaning to this limitation.

Claim s 6 and 25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 25 recites "PEB", which recitation is indefinite as its meaning is unknown.

It is noted that the originally filed claim 6 recited "PIP", not "PEB" thus claim 6 is being further non-compliant with the rules governing amendments as the newly recited "PEB" is not underlined and deleted "PIB" is not crossed out. However, to expedite the

prosecution, the claim is treated on the merits. The applicants should correct the claims for compliance in a subsequent office action.

For the purposes of the art rejection, this limitation is treated as "PIP".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9-12, 14-19, 20-26, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0949 282 to Kaneka Corporation, (hereinafter "Kaneka '282").

The rejection stands are per reasons of record set for the in the previous office action and incorporated herein by reference. As discussed in the previous office action, the reference expressly discloses norbornene as a suitable cationically polymerizable monomer for the second block. Cationic polymerization of norbornene results in cycloolefin polymer corresponding to the first formula recited in claim 1. As also discussed in the previous office action, the reference further expressly discloses suitability of dicyclopentadiene for forming the other (non-isobutylene) polymer block. Cationic polymerization of dicyclopentadiene results in polymer corresponding to the last formula recited in claims 1 and 20.

The invention as claimed, thus is fully within the purview of the cited reference, and clearly discloses each and every claimed element thus anticipating the claimed invention..

Claims 1, 7, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,804,664 to Kennedy et al., (hereinafter "Kennedy '664").

The rejection stands as per reasons of record set for the in the previous office action and incorporated herein by reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6,8,13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneka '282.

The rejection stands as per reasons of record set for the in the previous office action and incorporated herein by reference.

Response to Arguments

Applicant's arguments filed 12-16-2009 have been fully considered but they are not persuasive. With respect to the Kennedy reference the applicants argue that the

reference "does not disclose, teach or suggest a multi-arm star block copolymer comprising: an aromatic core having one or more arms extending therefrom; wherein each of the one or more arms are formed from a polyisobutylene segment and a cycloolefin or polycycloolefin segment, wherein the polyisobutylene segment and the cycloolefin or polycycloolefin segment form a repeating unit multiblock copolymer, wherein the cycloolefin or polycycloolefin segment is selected from one or more of the following formulas" then reciting four formulas for the cycloolefins. This argument is not persuasive since, as discussed above and in the previous office action, the reference expressly discloses an aromatic core (resulting from using bi or tri-functional aromatic initiators), and at least two arms extending from this block each of the arms comprising PIP block, and a cycloolefin block resulting from cationic polymerization of either norbornene or dicyclopentadiene.

The applicants further argue that the reference does not disclose a process that comprises a step of providing a bi-functional aromatic core. This argument does not have any basis. The examiner expressly discussed that the initiators disclosed in the reference are bi-functional aromatic initiators (completely corresponding, for example, to the bi-functional initiator (which provides the aromatic core) illustrated on page 12 of the instant application).

With respect to the rejection over Kennedy, the applicants present similar arguments. While the argument that the reference does not disclose a step of providing a bi-functional initiator are found persuasive, the arguments that the reference does not teach the claimed multi-arm block copolymer as claimed are Not found persuasive,

since the reference expressly discloses multi-arm copolymer having aromatic core, PIP arms and further expressly discloses norbornene as a suitable monomer for cationic polymerization of subsequent block.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on **Monday-Friday 9-5**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Irina S. Zemel
Primary Examiner
Art Unit 1796

ISZ